



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,168	12/28/2001	Haruo Ito	500014-93	1820

7590 08/29/2003

Oppenheimer Wolff & Donnelly LLP
Suite 3800
2029 Century Park East
Los Angeles, CA 90067

EXAMINER

SUAREZ, FELIX E

ART UNIT	PAPER NUMBER
----------	--------------

2857

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,168

Applicant(s)

ITO ET AL.

Examiner

Felix E Suarez

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-7 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 2,3,8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to because:

In FIG. 2, the labels are not readable.

Correction is required.

Substitute Specification

2. A substitute specification including the claims is required pursuant to 37 CFR 1.125(a) because there is an antecedent basis problem in claim 3 and in claim 9.

A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and must be accompanied by: 1) a statement that the substitute specification contains no new matter; and 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

3. Claims 3/1 and 9/7 are objected to under 35 U.S.C. 112, second paragraph.

Claim 3 and 9 recite the limitation "each of said data described in claim 2 (or in claim 8)". There is insufficient antecedent basis for this limitation in the claims depending from claims 1 and 7, respectively.

The Examiner considers that each of said data described in claim 2 (or in claim 8), lacks antecedent basis in claim 1, for example:

driving force of the driving portion of said valve apparatus;

driving force holding capacity;

sliding drag of said valve apparatus and of the driving portion;

a valve opening/closing time;

wear and loosening of said valve apparatus; and

limit stop position of a movable portion;

have not been recited.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

- (e) the invention was described in-
 - (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
 - (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Art Unit: 2857

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 4, 5, 7, 10 and 11 are rejected under 35 U.S.C. 102(e) as being unpatentable over March (U.S. Patent No. 6,490,506).

With respect to claims 1 and 7, March teaches a method (or apparatus) for diagnosing abnormality and estimating degradation in a valve apparatus, comprising the steps of:

connecting a driving force sensor provided to a driving portion of a valve apparatus to a diagnosing apparatus (see col. 7 line 44 to col. 8 line 11; col. 10, lines 39-44 and col. 11, lines 11-15), provisionally fitting an energy sensor for detecting feed energy to said driving portion (see col. 10 line 59 to col. 11 line 1 and col. 15, lines 47-53) and a vibration sensor for detecting vibration of said valve apparatus to said valve apparatus (see col. 12, lines 36-51);

converting detection signals outputted from said three kinds of sensors to predetermined signals in a data conversion unit (see col. 7, line 58 to col. 8, lines 11);

conducting an analytical diagnosing processing of diagnostic data information for each diagnostic item by referring to an allowance value of each diagnostic item calculated from the specification of said valve apparatus and set in advance, and to a maintenance record inclusive of the diagnostic result to

Art Unit: 2857

judge whether said valve apparatus is normal or abnormal (see col. 15, lines 37-67 and ;

conducting further degradation estimation by conducting calculation with past diagnostic results (see col.9, lines 35-59), and preparing a future maintenance plan, thereby making it possible to conduct diagnosis from outside without opening and disassembling said valve apparatus and without cutting off the energy source even during operation of said valve apparatus (see col. 10, lines 2-22 and col. 15, lines 54-67).

With respect to claims 4, 5, 10 and 11, March further teaches said valve apparatus is an electric valve (see col. 6, lines 35-41), and said energy sensor is a current (or magnetic) sensor for detecting a feed current to said driving portion or a leakage current (see col. 10 line 64 to col. 11 line15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over March (U.S. Patent No. 6,490,506) in view of Discenzo (U.S. Patent No 6,546,785).

With respect to claims 6 and 12 March teaches all the features of the claimed invention, except that March does not teach that said driving portion uses a rotational force, and said driving force sensor is a torque sensor.

But Discenzo teaches in a system for dynamic lubrication that the sensor information can also be provided to external control systems to adjust operating characteristics in accordance with the current detected state of the fluids. For example, if a fluid were determined to be running hotter, the sensor information can be employed to adjust the speed or torque of a controller (see Discenzo, col. 4, lines 41-52).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify March to include the dynamic lubrication sensor as taught by Discenzo, because the dynamic lubrication sensor can be employed to adjust the speed or torque of a controller.

6. Claims 2, 3, 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Goldowky [U.S. Patent No 5,924,975] describes a constant torque.

Hays et al. [U.S. Patent No 6,330,525] describes a valve position sensor.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix Suarez, whose telephone number is (703) 308-4926. The examiner can normally be reached on weekdays from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (703) 308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

August 21, 2003

F.S.


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800